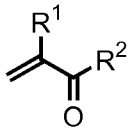
Listing of the Claims

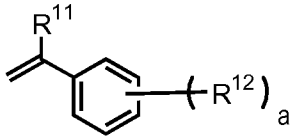
1. **(Original).** A method comprising the steps of

(a) curing a reactive monomer mix comprising at least one lens forming component and at least one ligand monomer under conditions sufficient to provide a reactivity ratio of the ligand monomer to at least one major lens forming component of at least about 0.45 lens; and

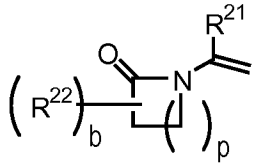
(b) treating said lens with a silver solution to form an antimicrobial lens comprising silver in an amount which is at least about 80% of target silver concentration, where the ligand monomer is of Formulae I, II, III or IV,



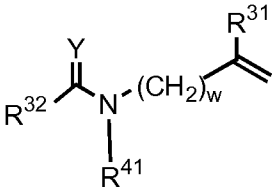
I



II



III



IV

wherein

R^1 is hydrogen or C_{1-6}alkyl;

R^2 is $-OR^3$, $-NH-R^3$, $-S-(CH_2)_d-R^3$, or $-(CH_2)_d-R^3$, wherein

d is 0-8;

R^3 is substituted C_{1-6}alkyl

where the alkyl substituents are selected from one or more members of the group consisting of carboxylic acid, sulfonic acid, phosphonic acid, amine, amidine, acetamide, nitrile, thiol, C_{1-6}alkyldisulfide, C_{1-6}alkylsulfide, phenyldisulfide, urea, C_{1-6}alkylurea, phenylurea, thiourea, C_{1-6}alkylthiourea,

phenylthiourea, substituted C_{1-6}alkyldisulfide, substituted phenyldisulfide, substituted C_{1-6}alkylurea, substituted phenylurea, substituted C_{1-6}alkylthiourea, and substituted phenylthiourea

wherein the C_{1-6}alkyldisulfide, phenyldisulfide, C_{1-6}alkylurea, C_{1-6}alkylthiourea, phenylurea, and phenylthiourea substituents are selected from the group consisting of C_{1-6}alkyl, haloC_{1-6}alkyl, halogen, hydroxyl, carboxylic acid, sulfonic acid, phosphonic acid, amine, amidine, acetamide, and nitrile;

$-(CR^4R^5)_q-(CHR^6)_m-SO_3H$

wherein R^4, R^5, and R^6 are independently selected from the group consisting of hydrogen, halogen, hydroxyl, and C_{1-6}alkyl,

q is 1-6, and

m is 0-6;

$-(CH_2)_n-S-S-(CH_2)_xNH-C(O)CR^7CH_2$,

wherein R^7 is hydrogen or C_{1-6}alkyl,

n is 1-6, and

x is 1-6;

$-(CR^8R^9)_t-(CHR^{10})_u-P(O)(OH)_2$

wherein R^8, R^9, and R^{10} are independently selected from the group consisting of hydrogen, halogen, hydroxyl, and C_{1-6}alkyl,

t is 1-6, and

u is 0-6;

phenyl, benzyl, pyridinyl, pyrimidinyl, pyrazinyl, benzimidazolyl, benzothiazolyl, benzotriazolyl, naphthaloyl, quinolinyl, indolyl, thiadiazolyl, triazolyl, 4-methylpiperidin-1-yl, 4-methylpiperazin-1-yl, substituted phenyl, substituted benzyl, substituted pyridinyl, substituted

pyrimidinyl, substituted pyrazinyl, substituted benzimidazolyl, substituted benzothiazolyl, substituted benzotriazolyl, substituted naphthaloyl, substituted quinolinyl, substituted indolyl, substituted thiadiazolyl, substituted triazolyl, substituted 4-methylpiperidin-1-yl; or

substituted 4-methylpiperazin-1-yl,

wherein the substituents are selected from one or more members of the group consisting of C_{1-6}alkyl, haloC_{1-6}alkyl, halogen, sulfonic acid, phosphonic acid, hydroxyl, carboxylic acid, amine, amidine, N-(2-aminopyrimidine)sulfonyl, N-(aminopyridine)sulfonyl, N-(aminopyrazine)sulfonyl, N-(2-aminopyrimidine)carbonyl, N-(aminopyridine)carbonyl, N-(aminopyrazine)carbonyl, N-(2-aminopyrimidine)phosphonyl, N-(2-aminopyridine)phosphonyl, N-(aminopyrazine)phosphonyl, N-(aminobenzimidazolyl)sulfonyl, N-(aminobenzothiazolyl)sulfonyl, N-(aminobenzotriazolyl)sulfonyl, N-(aminoindolyl)sulfonyl, N-(aminothiazolyl)sulfonyl, N-(aminotriazolyl)sulfonyl, N-(amino-4-methylpiperidinyl)sulfonyl, N-(amino-4-methylpiperazinyl)sulfonyl, N-(aminobenzimidazolyl)carbonyl, N-(aminobenzothiazolyl)carbonyl, N-(aminobenzotriazolyl)carbonyl, N-(aminoindolyl)carbonyl, N-(aminothiazolyl)carbonyl, N-(aminotriazolyl)carbonyl, N-(amino-4-methylpiperidinyl)carbonyl, N-(amino-4-methylpiperazinyl)carbonyl, N-(2-aminobenzimidazolyl)phosphonyl,

N-(2-aminobenzothiazolyl)phosphonyl,
N-(2-aminobenzotriazolyl)phosphonyl,
N-(2-aminoindolyl)phosphonyl,
N-(2-aminothiazolyl)phosphonyl,
N-(2-aminotriazolyl)phosphonyl,
N-(amino-4-methylpiperidinyl) phosphonyl,
N-(amino-4-methylpiperazinyl) phosphonyl, acetamide, nitrile, thiol, C_{1-6}alkyldisulfide, C_{1-6}alkylsulfide, phenyl disulfide, urea, C_{1-6}alkylurea, phenylurea, thiourea, C_{1-6}alkylthiourea, phenylthiourea, substituted C_{1-6}alkyldisulfide, substituted phenyldisulfide, substituted C_{1-6}alkylurea, substituted C_{1-6}alkylthiourea, substituted phenylurea, and substituted phenylthiourea

wherein the C_{1-6}alkyldisulfide, phenyldisulfide, C_{1-6}alkylurea, C_{1-6}alkylthiourea, phenylurea, and phenylthiourea substituents are selected from the group consisting of C_{1-6}alkyl, haloC_{1-6}alkyl, halogen, hydroxyl, carboxylic acid, sulfonic acid, phosphonic acid, amine, amidine, acetamide, and nitrile;

a is 1-5;

R^{11} is hydrogen or C_{1-6}alkyl;

R^{12} is hydroxyl, sulfonic acid, phosphonic acid, carboxylic acid, acetamide, thioC_{1-6}alkylcarbonyl, C_{1-6}alkyldisulfide, C_{1-6}alkylsulfide, phenyl disulfide, urea, C_{1-6}alkylurea, phenylurea, thiourea, C_{1-6}alkylthiourea, phenylthiourea, $-OR^{13}$, $-NH-R^{13}$, $-S-(CH_2)_d-R^{13}$, $-(CH_2)_d-R^{13}$, $-C(O)NH--(CH_2)_d-R^{13}$, $-C(O)-(CH_2)_d-R^{13}$, substituted C_{1-6}alkyldisulfide, substituted phenyldisulfide, substituted C_{1-6}alkylurea, substituted phenylurea, substituted phenylthiourea or substituted C_{1-6}alkylthiourea wherein the substituents are selected from the group consisting of C_{1-6}alkyl, haloC_{1-6}alkyl, halogen, hydroxyl, carboxylic acid, sulfonic acid, phosphonic acid, amine, amidine, acetamide, and nitrile;

where

d is 0-8;

R^{13} is thioC_{1-6}alkylcarbonyl;

substituted C_{1-6}alkyl

where the alkyl substituents are selected from one or more members of the group consisting of hydroxyl, carboxylic acid, sulfonic acid, phosphonic acid, amine, amidine, acetamide, nitrile, thiol, C_{1-6}alkyldisulfide, C_{1-6}alkylsulfide, phenyldisulfide, urea, C_{1-6}alkylurea, phenylurea, thiourea, C_{1-6}alkylthiourea, phenylthiourea, substituted C_{1-6}alkyldisulfide, substituted phenyldisulfide, substituted C_{1-6}alkylurea, substituted phenylurea, substituted C_{1-6}alkylthiourea and substituted phenylthiourea

wherein the C_{1-6}alkyldisulfide, phenyldisulfide, C_{1-6}alkylurea, C_{1-6}alkylthiourea, phenylurea, and phenylthiourea substituents are selected from the group consisting of C_{1-6}alkyl, haloC_{1-6}alkyl, halogen, hydroxyl, carboxylic acid, sulfonic acid, phosphonic acid, amine, amidine, acetamide, and nitrile;

$-(CR^{14}R^{15})_q-(CHR^{16})_m-SO_3H$

where R^{14}, R^{15}, and R^{16} are independently selected from the group consisting of hydrogen, halogen, hydroxyl, and C_{1-6}alkyl,

q is 1-6, and

m is 0-6;

$-(CH_2)_n-S-S-(CH_2)_xNH-C(O)CR^{17}CH_2$,

where R^{17} is hydrogen or C_{1-6}alkyl,

n is 1-6, and

x is 1-6;

$-(CR^{18}R^{19})_t-(CHR^{20})_u-P(O)(OH)_2$

where R^{18}, R^{19}, and R^{20} are independently selected from the group consisting of hydrogen, halogen, hydroxyl, and

C_{1-6}alkyl,

t is 1-6, and

u is 0-6;

phenyl; benzyl; pyridinyl; pyrimidinyl; pyrazinyl; benzimidazolyl; benzothiazolyl; benzotriazolyl; naphthaloyl; quinolinyl; indolyl; thiadiazolyl; triazolyl; 4-methylpiperidin-1-yl; 4-methylpiperazin-1-yl; substituted phenyl; substituted benzyl; substituted pyridinyl; substituted pyrimidinyl; substituted pyrazinyl; substituted benzimidazolyl; substituted benzothiazolyl; substituted benzotriazolyl; substituted naphthaloyl; substituted quinolinyl; substituted indolyl; substituted thiadiazolyl; substituted triazolyl; substituted 4-methylpiperidin-1-yl; or substituted 4-methylpiperazin-1-yl

wherein the substituents are selected from one or more members of the group consisting of C_{1-6}alkyl, haloC_{1-6}alkyl, halogen, sulfonic acid, phosphonic acid, hydroxyl, carboxylic acid, amine, amidine, N-(2-aminopyrimidine)sulfonyl, N-(aminopyridine)sulfonyl, N-(aminopyrazine)sulfonyl, N-(2-aminopyrimidine)carbonyl, N-(aminopyridine)carbonyl, N-(aminopyrazine)carbonyl, N-(2-aminopyrimidine)phosphonyl, N-(2-aminopyridine)phosphonyl, N-(aminopyrazine)phosphonyl, N-(aminobenzimidazolyl)sulfonyl, N-(aminobenzothiazolyl)sulfonyl, N-(aminobenzotriazolyl)sulfonyl, N-(aminoindolyl)sulfonyl, N-(aminothiazolyl)sulfonyl, N-(aminotriazolyl)sulfonyl, N-(amino-4-methylpiperidinyl)sulfonyl, N-(amino-4-methylpiperazinyl)sulfonyl,

N-(aminobenzimidazolyl)carbonyl,
N-(aminobenzothiazolyl)carbonyl,
N-(aminobenzotriazolyl)carbonyl,
N-(aminoindolyl)carbonyl, N-(aminothiazolyl)carbonyl,
N-(aminotriazolyl)carbonyl,
N-(amino-4-methylpiperidinyl)carbonyl,
N-(amino-4-methylpiperazinyl)carbonyl,
N-(2-aminobenzimidazolyl)phosphonyl,
N-(2-aminobenzothiazolyl)phosphonyl,
N-(2-aminobenzotriazolyl)phosphonyl,
N-(2-aminoindolyl)phosphonyl,
N-(2-aminothiazolyl)phosphonyl,
N-(2-aminotriazolyl)phosphonyl,
N-(amino-4-methylpiperidinyl) phosphonyl,
N-(amino-4-methylpiperazinyl) phosphonyl, acetamide,
nitrile, thiol, C_{1-6}alkyldisulfide, C_{1-6}alkylsulfide, phenyl
disulfide, urea, C_{1-6}alkylurea, phenylurea, thiourea,
C_{1-6}alkylthiourea, phenylthiourea, substituted
C_{1-6}alkyldisulfide, substituted phenyldisulfide, substituted
C_{1-6}alkylurea, substituted C_{1-6}alkylthiourea, substituted
phenylurea, and substituted phenylthiourea

wherein the C_{1-6}alkyldisulfide, phenyldisulfide, C_{1-6}alkylurea, C_{1-6}alkylthiourea, phenylurea, and phenylthiourea substituents are selected from the group consisting of C_{1-6}alkyl, haloC_{1-6}alkyl, halogen, hydroxyl, carboxylic acid, sulfonic acid, phosphonic acid, amine, amidine, acetamide, and nitrile;

b is 1-5; p is 1-5; R^{21} is hydrogen;

R^{22} is hydroxyl, sulfonic acid, phosphonic acid, carboxylic acid, thioC_{1-6}alkylcarbonyl, thioC_{1-6}alkylaminocarbonyl, C_{1-6}alkyldisulfide, phenyldisulfide, $-C(O)NH(CH_2)_{1-6}-SO_3H$, $-C(O)NH(CH_2)_{1-6}-P(O)(OH)_2$,

$-OR^{23}$, $-NH-R^{23}$, $-C(O)NH-(CH_2)_d-R^{23}$, $-S-(CH_2)_d-R^{23}$, $-(CH_2)_d-R^{23}$, urea, C_{1-6}alkylurea, phenylurea, thiourea, C_{1-6}alkylthiourea, phenylthiourea, substituted C_{1-6}alkyldisulfide, substituted phenyldisulfide, substituted C_{1-6}alkylurea, substituted, C_{1-6}alkylthiourea substituted phenylurea or substituted phenylthiourea wherein the substituents are selected from the group consisting of C_{1-6}alkyl, haloC_{1-6}alkyl, halogen, hydroxyl, carboxylic acid, sulfonic acid, phosphonic acid, amine, amidine, acetamide, and nitrile,

where

d is 0-8;

R^{23} is thioC_{1-6}alkylcarbonyl,

C_{1-6}alkyl,

substituted C_{1-6}alkyl

where the alkyl substituents are selected from one or more members of the group consisting of C_{1-6}alkyl, halo C_{1-6}alkyl, halogen, hydroxyl, carboxylic acid, sulfonic acid, phosphonic acid, amine, amidine, acetamide, nitrile, thiol, C_{1-6}alkyldisulfide, C_{1-6}alkylsulfide, phenyldisulfide, urea, C_{1-6}alkylurea, phenylurea, thiourea, C_{1-6}alkylthiourea, phenylthiourea, substituted C_{1-6}alkyldisulfide, substituted phenyldisulfide, substituted C_{1-6}alkylurea, substituted phenylurea, substituted C_{1-6}alkylthiourea, and substituted phenylthiourea

wherein the C_{1-6}alkyldisulfide, phenyldisulfide, C_{1-6}alkylurea, C_{1-6}alkylthiourea, phenylurea, and phenylthiourea substituents are selected from the group consisting of C_{1-6}alkyl, haloC_{1-6}alkyl, halogen, hydroxyl, carboxylic acid, sulfonic acid, phosphonic acid, amine, amidine, acetamide, and nitrile;

$-(CR^{24}R^{25})_q-(CHR^{26})_m-SO_3H$

where R^{24}, R^{25}, and R^{26} are independently selected from the group consisting of hydrogen, halogen, hydroxyl, and

C_{1-6}alkyl,

q is 1-6, and m is 0-6

$-(CH_2)_n-S-S-(CH_2)_xNH-C(O)CR^{27}CH_2$,

where R^{27} is hydrogen or C_{1-6}alkyl,

n is 1-6, and x is 1-6;

$-(CR^{28}R^{29})_t-(CHR^{30})_u-P(O)(OH)_2$

where R^{28}, R^{29}, and R^{30} are independently selected from the group consisting of hydrogen, halogen, hydroxyl, and C_{1-6}alkyl,

t is 1-6, and u is 0-6;

phenyl; benzyl; pyridinyl; pyrimidinyl; pyrazinyl; benzimidazolyl; benzothiazolyl; benzotriazolyl; naphthaloyl; quinolinyl; indolyl; thiadiazolyl; triazolyl; 4-methylpiperidin-1-yl; 4-methylpiperazin-1-yl; substituted phenyl; substituted benzyl; substituted pyridinyl; substituted pyrimidinyl; substituted pyrazinyl; substituted benzimidazolyl; substituted benzothiazolyl; substituted benzotriazolyl; substituted naphthaloyl; substituted quinolinyl; substituted indolyl; substituted thiadiazolyl; substituted triazolyl; substituted 4-methylpiperidin-1-yl; or substituted 4-methylpiperazin-1-yl,

wherein the substituents are selected from one or more members of the group consisting of C_{1-6}alkyl, haloC_{1-6}alkyl, halogen, sulfonic acid, phosphonic acid, hydroxyl, carboxylic acid, amine, amidine, N-(2-aminopyrimidine)sulfonyl, N-(aminopyridine)sulfonyl, N-(aminopyrazine)sulfonyl, N-(2-aminopyrimidine)carbonyl, N-(aminopyridine)carbonyl, N-(aminopyrazine)carbonyl, N-(2-aminopyrimidine)phosphonyl, N-(2-aminopyridine)phosphonyl, N-(aminopyrazine)phosphonyl,

N-(aminobenzimidazolyl)sulfonyl,
N-(aminobenzothiazolyl)sulfonyl,
N-(aminobenzotriazolyl)sulfonyl, N-(aminoindolyl)sulfonyl,
N-(aminothiazolyl)sulfonyl,
N-(aminotriazolyl)sulfonyl,
N-(amino-4-methylpiperidinyl)sulfonyl,
N-(amino-4-methylpiperazinyl)sulfonyl,
N-(aminobenzimidazolyl)carbonyl,
N-(aminobenzothiazolyl)carbonyl,
N-(aminobenzotriazolyl)carbonyl,
N-(aminoindolyl)carbonyl, N-(aminothiazolyl)carbonyl,
N-(aminotriazolyl)carbonyl,
N-(amino-4-methylpiperidinyl)carbonyl,
N-(amino-4-methylpiperazinyl)carbonyl,
N-(2-aminobenzimidazolyl)phosphonyl,
N-(2-aminobenzothiazolyl)phosphonyl,
N-(2-aminobenzotriazolyl)phosphonyl,
N-(2-aminoindolyl)phosphonyl,
N-(2-aminothiazolyl)phosphonyl,
N-(2-aminotriazolyl)phosphonyl,
N-(amino-4-methylpiperidinyl) phosphonyl,
N-(amino-4-methylpiperazinyl) phosphonyl, acetamide,
nitrile, thiol, C_{1-6}alkyldisulfide, C_{1-6}alkylsulfide, phenyl
disulfide, urea, C_{1-6}alkylurea, phenylurea, thiourea,
C_{1-6}alkylthiourea, phenylthiourea, substituted
C_{1-6}alkyldisulfide, substituted phenyldisulfide, substituted
C_{1-6}alkylurea, substituted C_{1-6}alkylthiourea, substituted
phenylurea, and substituted phenylthiourea

wherein the C_{1-6}alkyldisulfide, phenyldisulfide, C_{1-6}alkylurea, C_{1-6}alkylthiourea, phenylurea, and phenylthiourea substituents are selected from the group

consisting of C_{1-6}alkyl, haloC_{1-6}alkyl, halogen, hydroxyl, carboxylic acid, sulfonic acid, phosphonic acid, amine, amidine, acetamide, and nitrile;

w is 0-1;

Y is oxygen or sulfur; R^{31} is hydrogen or C_{1-6}alkyl;

R^{32} is hydroxyl, sulfonic acid, phosphonic acid, carboxylic acid, thioC_{1-6}alkylcarbonyl, thioC_{1-6}alkylaminocarbonyl, -C(O)NH-$(CH_2)_d$-R^{33}, -O-R^{33}, -NH-R^{33}, -S-$(CH_2)_d$-R^{33}, -$(CH_2)_d$-R^{33}, C_{1-6}alkyldisulfide, phenyldisulfide, urea, C_{1-6}alkylurea, phenylurea, thiourea, C_{1-6}alkylthiourea, phenylthiourea, C_{1-6}alkylamine, phenylamine, substituted C_{1-6}alkyldisulfide, substituted phenyldisulfide, substituted phenylurea, substituted C_{1-6}alkylamine, substituted phenylamine, substituted phenylthiourea, substituted C_{1-6}alkylurea or substituted C_{1-6}alkylthiourea wherein the substitutents are selected from the group consisting of C_{1-6}alkyl, haloC_{1-6}alkyl, halogen, hydroxyl, carboxylic acid, sulfonic acid, phosphonic acid, amine, amidine, acetamide, and nitrile

where

d is 0-8;

R^{33} is thioC_{1-6}alkylcarbonyl, C_{1-6}alkyl, substituted C_{1-6}alkyl where the alkyl substituents are selected from one or more members of the group consisting of C_{1-6}alkyl, halo C_{1-6}alkyl, halogen, hydroxyl, carboxylic acid, sulfonic acid, phosphonic acid, amine, amidine, acetamide, nitrile, thiol, C_{1-6}alkyldisulfide, C_{1-6}alkylsulfide, phenyldisulfide, urea, C_{1-6}alkylurea, phenylurea, thiourea, C_{1-6}alkylthiourea, phenylthiourea, substituted C_{1-6}alkyldisulfide, substituted phenyldisulfide, substituted C_{1-6}alkylurea, substituted phenylurea, substituted C_{1-6}alkylthiourea or substituted phenylthiourea
wherein the C_{1-6}alkyldisulfide, phenyldisulfide,

C_{1-6}alkylurea, C_{1-6}alkylthiourea, phenylurea, and phenylthiourea substituents are selected from the group consisting of C_{1-6}alkyl, haloC_{1-6}alkyl, halogen, hydroxyl, carboxylic acid, sulfonic acid, phosphonic acid, amine, amidine, acetamide, and nitrile;

$-(CR^{34}R^{35})_q-(CHR^{36})_m-SO_3H$

where R^{34}, R^{35}, and R^{36} are independently selected from the group consisting of hydrogen, halogen, hydroxyl, and C_{1-6}alkyl,

q is 1-6, and m is 0-6;

$-(CH_2)_n-S-S-(CH_2)_xNH-C(O)CR^{37}CH_2$,

where R^{37} is hydrogen or C_{1-6}alkyl,

n is 1-6, and x is 1-6;

$-(CR^{38}R^{39})_t-(CHR^{40})_u-P(O)(OH)_2$

where R^{38}, $R3^9$, and R^{40} are independently selected from the group consisting of hydrogen, halogen, hydroxyl, and C_{1-6}alkyl,

t is 1-6, and u is 0-6;

phenyl; benzyl; pyridinyl; pyrimidinyl; pyrazinyl; benzimidazolyl; benzothiazolyl; benzotriazolyl; naphthaloyl; quinolinyl; indolyl; thiadiazolyl; triazolyl; 4-methylpiperidin-1-yl; 4-methylpiperazin-1-yl; substituted phenyl; substituted benzyl; substituted pyridinyl; substituted pyrimidinyl; substituted pyrazinyl; substituted benzimidazolyl; substituted benzothiazolyl; substituted benzotriazolyl; substituted naphthaloyl; substituted quinolinyl; substituted indolyl; substituted thiadiazolyl; substituted triazolyl; substituted 4-methylpiperidin-1-yl; or substituted 4-methylpiperazin-1-yl,

wherein the substituents are selected from one or more

members of the group consisting of C_{1-6}alkyl, haloC_{1-6}alkyl, halogen, sulfonic acid, phosphonic acid, hydroxyl, carboxylic acid, amine, amidine, N-(2-aminopyrimidine)sulfonyl, N-(aminopyridine)sulfonyl, N-(aminopyrazine)sulfonyl, N-(2-aminopyrimidine)carbonyl, N-(aminopyridine)carbonyl, N-(aminopyrazine)carbonyl, N-(2-aminopyrimidine)phosphonyl, N-(2-aminopyridine)phosphonyl, N-(aminopyrazine)phosphonyl, N-(aminobenzimidazolyl)sulfonyl, N-(aminobenzothiazolyl)sulfonyl, N-(aminobenzotriazolyl)sulfonyl, N-(aminoindolyl)sulfonyl, N-(aminothiazolyl)sulfonyl, N-(aminotriazolyl)sulfonyl, N-(amino-4-methylpiperidinyl)sulfonyl, N-(amino-4-methylpiperazinyl)sulfonyl, N-(aminobenzimidazolyl)carbonyl, N-(aminobenzothiazolyl)carbonyl, N-(aminobenzotriazolyl)carbonyl, N-(aminoindolyl)carbonyl, N-(aminothiazolyl)carbonyl, N-(aminotriazolyl)carbonyl, N-(amino-4-methylpiperidinyl)carbonyl, N-(amino-4-methylpiperazinyl)carbonyl, N-(2-aminobenzimidazolyl)phosphonyl, N-(2-aminobenzothiazolyl)phosphonyl, N-(2-aminobenzotriazolyl)phosphonyl, N-(2-aminoindolyl)phosphonyl, N-(2-aminothiazolyl)phosphonyl, N-(2-aminotriazolyl)phosphonyl, N-(amino-4-methylpiperidinyl) phosphonyl, N-(amino-4-methylpiperazinyl) phosphonyl, acetamide,

nitrile, thiol, C_{1-6}alkyldisulfide, C_{1-6}alkylsulfide, phenyl disulfide, urea, C_{1-6}alkylurea, phenylurea, thiourea, C_{1-6}alkylthiourea, phenylthiourea, substituted C_{1-6}alkyldisulfide, substituted phenyldisulfide, substituted C_{1-6}alkylurea, substituted C_{1-6}alkylthiourea, substituted phenylurea, and substituted phenylthiourea

wherein the C_{1-6}alkyldisulfide, phenyldisulfide, C_{1-6}alkylurea, C_{1-6}alkylthiourea, phenylurea, and phenylthiourea substituents are selected from the group consisting of C_{1-6}alkyl, haloC_{1-6}alkyl, halogen, hydroxyl, carboxylic acid, sulfonic acid, phosphonic acid, amine, amidine, acetamide, and nitrile;

R^{41} is hydrogen, C_{1-6}alkyl, phenyl, C_{1-6}alkylcarbonyl, phenylcarbonyl, substituted C_{1-6}alkyl, substituted phenyl, substituted C_{1-6}alkylcarbonyl or substituted phenylcarbonyl,

wherein

the substituents are selected from the group consisting of C_{1-6}alkyl, haloC_{1-6}alkyl, halogen, hydroxyl, carboxylic acid, sulfonic acid, phosphonic acid, amine, amidine, acetamide, and nitrile.

2. **(Original).** The method of claim 1 wherein said ratio is at least about 0.5.

3. **(Original).** The method of claim 1 wherein the lens comprises silver in an amount which is at least about 90% of the target silver concentration.

4. **(Original).** The method of claim 1 wherein said at least one lens forming component comprises at least about 30 weight percent of said reactive monomer mixture.

5. **(Original).** The method of claim 1 wherein said at least one lens forming component comprises at least about 50 weight percent of said reactive monomer mixture.

6. **(Original).** The method of claim 4 wherein said at least one lens forming component comprises at least two lens forming components having similar solubilities.

7. **(Original).** The method of claim 1 wherein the ligand monomer is a monomer of Formula I and,

R^1 is hydrogen or C_{1-3}alkyl;

R^2 is NH-R^3;

d is 0;

R^3 is substituted phenyl, -$(CR^4 R^5)_q$-$(CHR^6)_m$-SO_3H, -$(CR^8R^9)_t$-$(CHR^{10})_u$-$P(O)(OH)_2$ or -$(CH_2)_n$-S-S-$(CH_2)_x$NH-$C(O)CR^7CH_2$;

R^{4-6} are independently selected from the group consisting of hydrogen or C_{1-3}alkyl;

q is 1-3; m is 1-3;

R^{7-10} are independently selected from the group consisting of hydrogen or C_{1-3}alkyl;

t is 1-3; u is 1-3; n is 2-4; and x is 2-4.

8. **(Original).** The method of claim 1 wherein the lens is a soft contact lens.

9. **(Original).** The method of claim 1 wherein the lens comprises about 0.01 to about 20 weight percent ligand monomer.

10. **(Original).** The method of claim 1 wherein the lens comprises about 0.01 to about 3 weight percent ligand monomer.

11. **(Original).** The method of claim 1 wherein the lens comprises about 100 to about 2000 ppm ligand monomer.

12. **(Original).** The method of claim 1 wherein the lens is a silicone hydrogel.

13. **(Original).** The method of claim 1 wherein, the lens comprises a formulation

selected from the group consisting of etafilcon A, balafilcon, A, acquafilcon A, lenefilcon A, galyfilcon A, senofilcon A and lotrafilcon A.

14. **(Original).** The method of claim 1 wherein,

R^1 is hydrogen or methyl;

R^2 is NH-R^3;

R^3 is -$(CR^4 R^5)_q$-$(CHR^6)_m$-SO_3H, -$(CR^8R^9)_t$-$(CHR^{10})_u$-$P(O)(OH)_2$ or -$(CH_2)_n$-S-S-$(CH_2)_x$NH-C(O)CHR^7CH_2;

R^{4-6} are independently hydrogen or methyl;

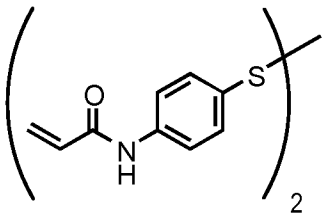
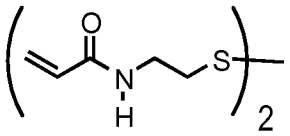
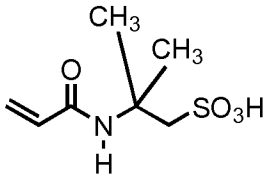
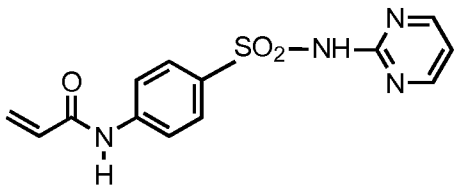
q is 1-2; m is 1-2;

R^7 is hydrogen;

R^{8-10} are independently hydrogen or methyl;

t is 1; u is 1-2; n is 2-3; and x is 2-3.

15. **(Original).** The method of claim 1 wherein the ligand monomer is selected from the group consisting of




and

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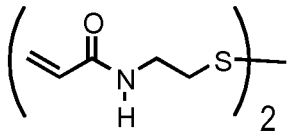
16. **(Original).** The method of claim 1 wherein the antimicrobial lens comprises about 10 ppm to about 4,000 ppm silver.

17. **(Original).** The method of claim 1 wherein the antimicrobial lens comprises about 30 ppm to about 2000 ppm silver.

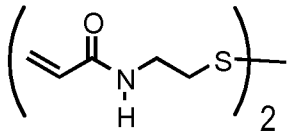
18. **(Original).** The method of claim 1 wherein the antimicrobial lens comprises about 30 ppm to about 1000 ppm silver.

19. **(Original).** The method of claim 1 wherein the lens is a silicone hydrogel and the ligand monomer is



20. **(Original).** The method of claim 19 wherein silver is present at about 30 ppm to about 2000 ppm and the ligand monomer is present at about 0.01 to about 3 weight percent.

21. **(Original).** The method of claim 13 wherein the ligand monomer is



22. **(Original).** The method of claim 21 wherein silver is present in the antimicrobial lens at about 30 ppm to about 2000 ppm and the ligand monomer is present at about 0.01 to about 3 weight percent.

23. **(Withdrawn).** The method of claim 21 wherein the lens formulation is etafilcon A or acquafilcon A.

24. **(Original).** The method of claim 1 wherein the silver solution is aqueous silver nitrate having a concentration of about 0.1 μg/mL to about 0.3 g/mL.

25. **(Original).** The method of claim 1 wherein, treating comprises soaking the lens with or in a silver solution.

26. **(Original).** The method of claim 25 wherein, the lens is soaked in the silver solution for about 2 minutes to about 2 hours.

27. **(Original).** The method of claim 1 wherein, treating comprises storing the lens in the silver solution for about 20 minutes to about 5 years.

28. **(Original).** The method of claim 1 wherein said monomer mix further comprises at least one initiator.

29. **(Original).** The method of claim 28 wherein said initiator comprises at least one photoinitiator.

30. **(Original).** The method of claim 29 wherein the curing step comprises an initiator concentration and light intensity sufficient to provide the reactivity ratio of at least about 0.45.

31. **(Original).** The method of claim 30 wherein the initiator concentration is at least about 0.4 weight % and said intensity is at least about 4 mW/cm^2.

32. **(Original).** The method of claim 30 wherein the initiator concentration is at least about 0.9 weight % and said intensity is at least about 1 mW/cm^2.

33. **(Original).** The method of claim 30 wherein the initiator concentration is at least about 0.4 weight % and said intensity is at least about 6 mW/cm^2.

34. **(Original).** The method of claim 30 wherein the initiator concentration is at least about 0.9 weight % and said intensity is at least about 4 mW/cm^2.

35. **(Original).** The method of claim 30 wherein the initiator concentration about 0.4 to about 2 weight % and said intensity is at least about 4 mW/cm^2.

36 **(Withdrawn).** The method of claim 1 wherein said ligand monomer is selected from the monomers of Formula II.

37. **(Withdrawn).** The method of claim 36 wherein,

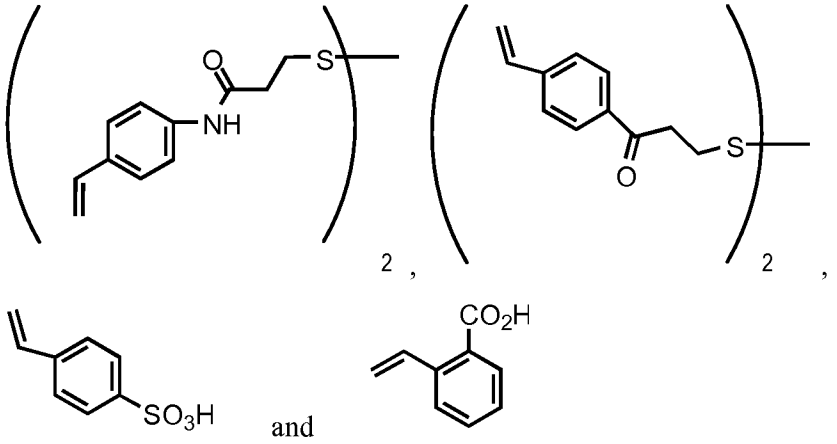
a is 1-2,

R^{11} is hydrogen or C_{1-3}alkyl,

R^{12} is sulfonic acid, carboxylic acid, phosphonic acid, C_{1-6}alkyldisulfide, C_{1-6}alkylsulfide, phenyldisulfide, substiuted phenyldisulfide or NH-R^{13},

R^{13} is thioC_{1-6}alkylcarbonyl.

38. **(Withdrawn).** The method of claim 36 wherein the monomer of Formula II is selected from the group consisting of



39. **(Withdrawn).** The method of claim 1 wherein said ligand monomer is selected from the group consisting of monomers of Formula III.

40. **(Withdrawn).** The method of claim 39 wherein,

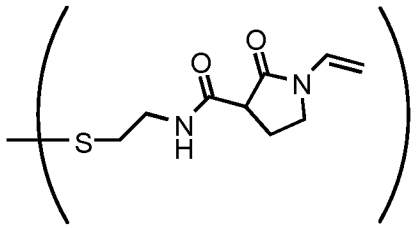
p is 1-3;

b is 1-2;

R^{21} is hydrogen;

R^{22} is sulfonic acid, phosphonic acid, carboxylic acid, thioC_{1-6}alkylcarbonyl, thioC_{1-6}alkylaminocarbonyl, C_{1-6}alkyldisulfide, C_{1-6}alkylsulfide, phenyldisulfide, substiuted phenyldisulfide, H_3OS-$(CH_2)_{1-6}$NHC(O) or $(HO)_2(O)P$-$(CH_2)_{1-6}$NHC(O)-.

41. **(Withdrawn).** The method of claim 39 wherein the monomer of Formula III is selected from the group consisting of



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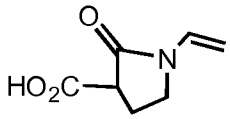

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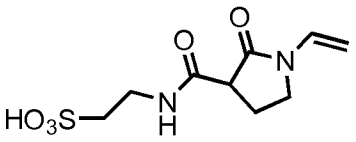

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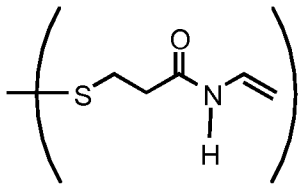
42. **(Withdrawn).** The method of claim 1 wherein the ligand monomer is selected from the group consisting of monomers of Formula IV.

43. **(Withdrawn).** The method of claim 42 wherein,
w is 0-1; R^{31} is hydrogen;
R^{32} is amine, C_{1-3}alkylamine, phenylamine, substituted phenylamine; thioC_{1-3}alkylcarbonyl; and R^{41} is hydrogen.

44. **(Withdrawn).** The method of claim 42 wherein the ligand monomer is selected from the group consisting of



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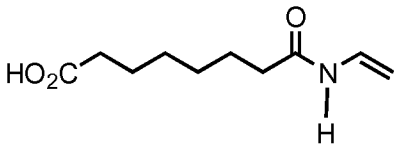

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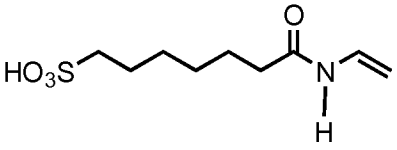

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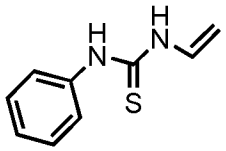

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